

Please amend Claim 6 as follows:

G² 6. (Twice amended) A composition as claimed in claim 1, wherein said stabilizing entities are provided as a solution.

Please amend Claim 10 as follows:

G³ 10. (Twice amended) The composition as claimed in claim 6, wherein said stabilizing entities are a solution of tetrapropyl orthosilicate.

Please amend Claim 13 as follows:

13. (Twice amended) A process for making the composition of Claim 1, said process comprising:

G⁴ doping and mixing a hydroxyapatite substance with a composition of stabilizing entities to uniformly distribute said stabilizing entities throughout said entire hydroxyapatite substance; and sintering said uniformly doped hydroxyapatite substance; wherein sintering converts at least a portion of said uniformly doped hydroxyapatite substance into primarily alpha tricalcium phosphate.

✓
Please cancel Claims 14 and 15.

✓
Please cancel Claims 19 - 21.

Please amend Claims 22 and 23 as follows.

G5

22. (Once amended) The process of claim 13, wherein sintering is done at temperatures of about 900°C to 1100°C.

23. (Once amended) The composition of claim 1, where said composition is provided as a microporous polycrystalline structure.

✓
Please cancel Claim 24.

Please amend Claims 25 - 27 as follows:

G6

25. (Three times amended) The composition of claim 23, wherein said structure has said globular morphology of Figure 14.

G7

26. (Once amended) The composition of claim 25, wherein said morphology comprises rounded granules with a lateral dimension of about 0.5 to 1 μm.

G8

27. (Three times amended) An implantable calcified bone matrix comprising:
a) the composition of claim 1 forming a structure for supporting said bone matrix;
and
b) a calcified bone matrix secreted by osteoblasts on said structure.

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Please cancel Claims 30 and 31.

Please amend Claims 32, 33, 35, 37, and 38 as follows:

69 32. (Once amended) The composition of claim 23, wherein said composition has an internal macroporosity.

33. (Once amended) An implantable device comprising the composition of claim 1.

G10 35. (Twice amended) A method for the culturing of functional bone cells, said method comprising:
applying a suspension of bone cells in physiological media to the composition of claim 1 provided as a substrate.

37. (Twice amended) A method for the *ex vivo* engineering of a mineralized collagenous implant, the method comprising the steps of:

- G11
- a) providing the composition of claim 1 as a bulk material;
 - b) applying a suspension of osteoblasts on said composition and incubating for a time sufficient for said osteoblasts to secrete mineralized collagenous bone matrix on said bulk material; and
 - c) implanting the product of step (b) in a patient.

G12 38. (Once amended) The composition of claim 1, wherein said stabilizing entities are silicon.

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Please cancel Claims 39 - 46.